

BEFORE THE
BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
DEPARTMENT OF CONSUMER AFFAIRS
STATE OF CALIFORNIA

In the Matter of the Accusation against:)	
)	
DARREL WAYNE HARRIS)	Case No. 822-A
52 Miner Road)	
Orinda, CA 94563)	
)	
Civil Engineer License No. C 17985)	
Structural Engineer License No. S 2433,)	
)	
Respondent.)	
_____)	

DECISION

The attached Stipulated Settlement and Disciplinary Order is hereby adopted by the Professional Engineers and Land Surveyors as its Decision in the above-entitled matter, with the following correction.

All references in the Stipulated Settlement and Disciplinary Order to Accusation No. 882-A or Case No. 882-A are corrected to refer to Accusation Case No. 822-A.

This Decision shall become effective on June 10, 2010.

IT IS SO ORDERED May 5, 2010.

Original Signed

BOARD FOR PROFESSIONAL ENGINEERS
AND LAND SURVEYORS
Department of Consumer Affairs
State of California

1 EDMUND G. BROWN JR.
Attorney General of California
2 ALFREDO TERAZZAS
Senior Assistant Attorney General
3 DIANN SOKOLOFF
Supervising Deputy Attorney General
4 State Bar No. 161082
1515 Clay Street, 20th Floor
5 P.O. Box 70550
Oakland, CA 94612-0550
6 Telephone: (510) 622-2212
Facsimile: (510) 622-2270
7 *Attorneys for Complainant*

8 **BEFORE THE**
BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
9 **DEPARTMENT OF CONSUMER AFFAIRS**
10 **STATE OF CALIFORNIA**

11 In the Matter of the Accusation Against:

Case No. 882-A

12 **DARREL WAYNE HARRIS**
13 **52 Miner Road**
Orinda, California 94563
14 **Civil Engineer License No. C17985**
Structural Engineer License No. S2433

**STIPULATED SETTLEMENT AND
DISCIPLINARY ORDER**

15 Respondent.

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17
18 IT IS HEREBY STIPULATED AND AGREED by and between the parties to the above-
19 entitled proceedings that the following matters are true:

20 **PARTIES**

21 1. Cindi Christenson, P.E., who was the Complainant in this matter and filed this matter
22 before the Board, was, at the time, the Executive Officer of the Board for Professional Engineers
23 and Land Surveyors, and brought this action solely in her official capacity. For purposes of
24 resolving this matter, David E. Brown is the current Executive Officer of the Board, and succeeds
25 Ms. Christenson as the Complainant. The Complainant is represented in this matter by Edmund
26 G. Brown Jr., Attorney General of the State of California, by Diann Sokoloff, Supervising Deputy
27 Attorney General.
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2. Respondent Darrel Wayne Harris (Respondent) is representing himself in this proceeding and has chosen not to exercise his right to be represented by counsel.

3. On or about August 15, 1968, the Board for Professional Engineers and Land Surveyors issued Civil Engineer License No. C17985 to Darrel Wayne Harris (Respondent). The Civil Engineer License was in full force and effect at all times relevant to the charges brought in Accusation No. 882-A and will expire on June 30, 2009, unless renewed.

4. On or about January 20, 1982, the Board for Professional Engineers and Land Surveyors issued Structural Engineer License No. S2433 to Darrel Wayne Harris (Respondent). The Structural Engineer License was in full force and effect at all times relevant to the charges brought in Accusation No. 882-A and will expire on June 30, 2009, unless renewed.

JURISDICTION

5. Accusation No. 882-A was filed before the Board for Professional Engineers and Land Surveyors (Board), Department of Consumer Affairs, and is currently pending against Respondent. The Accusation and all other statutorily required documents were properly served on Respondent on January 5, 2009. Respondent timely filed his Notice of Defense contesting the Accusation. A copy of Accusation No. 882-A is attached as Exhibit A and incorporated herein by reference.

ADVISEMENT AND WAIVERS

6. Respondent has carefully read, and understands the charges and allegations in Accusation No. 882-A. Respondent has also carefully read, and understands the effects of this Stipulated Settlement and Disciplinary Order.

7. Respondent is fully aware of his legal rights in this matter, including the right to a hearing on the charges and allegations in the Accusation; the right to be represented by counsel at his own expense; the right to confront and cross-examine the witnesses against him; the right to present evidence and to testify on his own behalf; the right to the issuance of subpoenas to compel the attendance of witnesses and the production of documents; the right to reconsideration and court review of an adverse decision; and all other rights accorded by the California Administrative Procedure Act and other applicable laws.

8. Respondent voluntarily, knowingly, and intelligently waives and gives up each and every right set forth above.

CULPABILITY

9. Respondent admits that each and every charge and allegation in Accusation No. 882-A, if proven at hearing, would constitute cause for discipline with regard to the negligence allegation and the failure to comply with the requirements for a written contract allegation, as alleged in the First and Fourth Causes for Discipline in the Accusation.

10. Respondent agrees that his Civil Engineer License and his Structural Engineer License are subject to discipline and he agrees to be bound by the Board for Professional Engineers and Land Surveyors (Board)'s imposition of discipline as set forth in the Disciplinary Order below.

CIRCUMSTANCES IN MITIGATION

11. Respondent Darrel Wayne Harris has never been the subject of any disciplinary action.

CONTINGENCY

12. This stipulation shall be subject to approval by the Board for Professional Engineers and Land Surveyors. Respondent understands and agrees that counsel for Complainant and the staff of the Board for Professional Engineers and Land Surveyors may communicate directly with the Board regarding this stipulation and settlement, without notice to or participation by Respondent. By signing the stipulation, Respondent understands and agrees that he may not withdraw his agreement or seek to rescind the stipulation prior to the time the Board considers and acts upon it. If the Board fails to adopt this stipulation as its Decision and Order, the Stipulated Settlement and Disciplinary Order shall be of no force or effect, except for this paragraph, it shall be inadmissible in any legal action between the parties, and the Board shall not be disqualified from further action by having considered this matter.

13. The parties understand and agree that facsimile copies of this Stipulated Settlement and Disciplinary Order, including facsimile signatures thereto, shall have the same force and effect as the originals.

14. This Stipulated Settlement and Disciplinary Order is intended by the parties to be an integrated writing representing the complete, final, and exclusive embodiment of their agreement. It supersedes any and all prior or contemporaneous agreements, understandings, discussions, negotiations, and commitments (written or oral). This Stipulated Settlement and Disciplinary Order may not be altered, amended, modified, supplemented, or otherwise changed except by a writing executed by an authorized representative of each of the parties.

15. In consideration of the foregoing admissions and stipulations, the parties agree that the Board may, without further notice or formal proceeding, issue and enter the following Disciplinary Order:

DISCIPLINARY ORDER

IT IS HEREBY ORDERED that Civil Engineer License No. C17985 and Structural Engineer License No. S2433 issued to Respondent Darrel Wayne Harris (Respondent) are revoked. However, the revocation is stayed and Respondent is placed on probation for three (3) years on the following terms and conditions.

1. **Obey All Laws.** The Respondent shall obey all laws and regulations related to the practices of professional engineering and professional land surveying.

2. **Submit Reports.** The Respondent shall submit such special reports as the Board may require.

3. **Tolling of Probation.** The period of probation shall be tolled during the time the Respondent is practicing exclusively outside the state of California. If, during the period of probation, the Respondent practices exclusively outside the state of California, the Respondent shall immediately notify the Board in writing.

4. **Violation of Probation.** If the Respondent violates the probationary conditions in any respect, the Board, after giving the Respondent notice and the opportunity to be heard, may vacate the stay and reinstate the disciplinary order which was stayed. If, during the period of probation, an accusation or petition to vacate stay is filed against the Respondent, or if the matter has been submitted to the Office of the Attorney General for the filing of such, the Board shall

1 have continuing jurisdiction until all matters are final, and the period of probation shall be
2 extended until all matters are final.

3 5. **Completion of Probation.** Upon successful completion of all of the probationary
4 conditions and the expiration of the period of probation, the Respondent's license shall be
5 unconditionally restored.

6 6. **Cost Recovery.** The Respondent is hereby ordered to reimburse the Board the
7 amount of \$8,500.00 within 2 ½ years from the effective date of this decision for its investigative
8 and prosecution costs. Failure to reimburse the Board's costs of investigation and prosecution
9 shall constitute a violation of the probation order, unless the Board agrees in writing to payment
10 by an installment plan because of financial hardship.

11 7. **Examination.** Within 60 days of the effective date of the decision, the Respondent
12 shall successfully complete and pass the California Laws and Board Rules examination, as
13 administered by the Board.

14 8. **Ethics Course.** Within 2 ½ years of the effective date of the decision, Respondent
15 shall successfully complete and pass a course in professional ethics, approved in advance by the
16 Board or its designee.

17 9. **Take And Pass Examinations.** Within 2 ½ years of the effective date of the
18 decision, Respondent shall successfully complete and pass, with a grade of "C" or better, two
19 college-level courses, approved in advance by the Board or its designee. Such courses shall be
20 specifically related to the area of violation. For purposes of this subdivision, "college-level
21 course" shall mean a course offered by a community college or a four-year university of three
22 semester units or the equivalent; "college-level course" does not include seminars.

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DATED: 3/16/10 Original Signed
DARREL WAYNE HARRIS
Respondent

The foregoing Stipulated Settlement and Disciplinary Order is hereby respectfully submitted for consideration by the Board for Professional Engineers and Land Surveyors of the Department of Consumer Affairs.

Respectfully Submitted,

EDMUND G. BROWN JR.
Attorney General of California
ALFREDO TERAZZAS
Senior Assistant Attorney General

DIANN SOKOLOFF
Supervising Deputy Attorney General
Attorneys for Complainant

6

Exhibit A

Accusation No. 882-A

1 EDMUND G. BROWN JR., Attorney General
of the State of California
2 WILBERT E. BENNETT
Supervising Deputy Attorney General
3 DIANN SOKOLOFF, State Bar No. 161082
Deputy Attorney General
4 1515 Clay Street, 20th Floor
P.O. Box 70550
5 Oakland, CA 94612-0550
Telephone: (510) 622-2212
6 Facsimile: (510) 622-2270

7 Attorneys for Complainant

8 **BEFORE THE**
9 **BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS**
10 **DEPARTMENT OF CONSUMER AFFAIRS**
STATE OF CALIFORNIA

11 In the Matter of the Accusation Against:

Case No. 822-A

12 DARREL WAYNE HARRIS

A C C U S A T I O N

13 52 Miner Road
Orinda, CA 94563
14 Civil Engineer License No. C 17985
Structural Engineer License No. S 2433

15 Respondent.
16

17 Complainant alleges:

18 PARTIES

19 1. Cindi Christenson, P.E. (Complainant) brings this Accusation solely in her official
20 capacity as the Executive Officer of the Board for Professional Engineers and Land Surveyors,
21 Department of Consumer Affairs.

22 2. On or about August 15, 1968, the Board for Professional Engineers and Land
23 Surveyors issued Civil Engineer License Number C17985 to Darrel Wayne Harris (Respondent).
24 The Civil Engineer License was in full force and effect at all times relevant to the charges
25 brought herein and will expire on June 30, 2009, unless renewed.

26 3. On or about January 2, 1982, the Board for Professional Engineers and Land
27 Surveyors issued Structural Engineer License Number S 2433 to Darrel Wayne Harris
28 (Respondent). The Structural Engineer License was in full force and effect at all times relevant to

1 the charges brought herein and will expire on June 30, 2009, unless renewed.

2 JURISDICTION

3 4. This Accusation is brought before the Board for Professional Engineers and Land
4 Surveyors (Board), Department of Consumer Affairs, under the authority of the following laws.
5 All section references are to the Business and Professions Code unless otherwise indicated.

6 5. Section 6775 of the Code states, in pertinent part, that "[T]he board may reprove,
7 suspend for a period not to exceed two years, or revoke the certificate of any professional
8 engineer registered under this chapter:

9 ...

10 "(c) Who has been found guilty by the board of negligence or incompetence in his
11 or her practice.

12 "(d) Who has been found guilty by the board of any breach or violation of a
13 contract to provide professional engineering services.

14 ...

15 "(h) Who violates any provision of this chapter."

16 6. Section 6749 (a) provides, in pertinent part, that a professional engineer shall use
17 a written contract when contracting to provide professional engineering services to a client,
18 which shall include certain specified information, including the license number of the
19 professional engineer and a description of the procedure to be used by any party to terminate the
20 contract in the written contract.

21 7. Section 125.3 of the Code provides, in pertinent part, that the Board may request
22 the administrative law judge to direct a licensee found to have committed a violation or
23 violations of the licensing act to pay a sum not to exceed the reasonable costs of the investigation
24 and enforcement of the case.

25 GORDON PROPERTY LOCATED AT 1630 CLAY STREET, SAN FRANCISCO, CA

26 8. On or about August 16, 2005, respondent entered into a written contract with
27 Lizbeth Gordon to provide structural engineering plans for remodeling and seismic strengthening
28 of a property located at 1630 Clay Street in San Francisco, California, for a total fee of \$5,900.

Specifically, respondent was hired to provide a seismic upgrade at the garage level of the property, an exterior deck addition, interior remodel work, and the addition of a roof-top unit for a six-unit residential building. The contract, which is a "Proposal to provide Structural Engineering Services for improvements to 1630 Clay Street, San Francisco, CA," does not bear respondent's professional engineer's license number, and lacks a description of the procedure to be used to terminate the contract. In addition, supplemental work was authorized and the fee for the supplemental work was \$4,900, so the total was \$10,150 for the entire contract. Ms. Gordon paid respondent a \$5,500 retainer at the start of the project. Ms. Gordon terminated the contract and on December 23, 2005, she engaged a different structural engineering firm to complete the job.

9. In preparing plans for the above-mentioned Clay Street property, respondent committed certain acts or omissions in his calculations, which are hereafter set forth.

Calculations: (Comments based on original engineering calculations)

A. (From page 1 [in sequence] of Calculations)-- For the seismic design of the building, respondent used the static force procedures of the San Francisco Building Code (SFBC)1630.2 with an adjustment factor of 0.75 added to the base shear numbers. While this procedure is correct and in line with relevant building codes, respondent used the incorrect value of 4.5 for seismic coefficient R for steel design option. Section 6 of the SFBC 1605.4.3 states that R may be 5.5 regardless of the bracing system or material used. Based on the licensee's calculations, the governing load case for lateral load design was shown to be controlled by wind design in the transverse direction of the building and seismic in the longitudinal direction of the building. Consequently, the selection of the incorrect seismic coefficient had no material effect on the transverse direction of the building. Ultimately, the lateral design in the transverse direction of the building was governed by wind forces. The standard of care, however, is to be generally knowledgeable about jurisdictional building code requirements and amendments and cite them in the calculations as needed. No reference was made to the SFBC in the entire body of respondent's calculations. The above-described conduct by respondent constitutes negligence.

B. (From page 6 [in sequence] of Calculations) --Under "Roof rafters

1 supporting roof-top room," calculations of reactions R1 and R2 are based on the wrong span
2 length of 23 feet. Actual span length is clearly indicated at the beginning of the section as 17 feet
3 but the incorrect dimension was used in the body of calculations. Consequently, the calculated
4 values for R1, R2 and M are incorrect. The error resulted in a larger rafter size than was needed.
5 The above-described conduct by respondent constitutes incompetence.

6 C. (From page 8 [in sequence] of Calculations) -- In "Wall stud btwn 4th level
7 and roof," respondent determined the allowable axial capacity of the typical 2" x 3 3/4" studs
8 using the methodology outlined in section 2507 of the 1991 Uniform Building Code which has
9 been superceded by the current code. The current code for wood design is more stringent and
10 utilizes a Cp modification factor for allowable axial loads. Respondent concluded that the stress
11 check on the existing wall studs is within allowable limits and his conclusion is deficient. In
12 actuality, the stress check for axial loads is approximately 2.4 meaning that the wall studs are
13 overstressed by a factor more than 2. The above-described conduct by respondent constitutes
14 incompetence.

15 D. (From page 10 [in sequence] of Calculations) -- Under "Clr joists under
16 rear bedroom," respondent failed to calculate the maximum moment correctly. Maximum
17 moment occurs at the point of concentrated load P which is 11.5 feet from the left support.
18 Respondent used 14.2 feet and concluded with a moment of 7268 ft-lbs. If it was respondent's
19 intention to actually calculate the moment at this distance from the support, then resisting
20 moment caused by the concentrated load P was missing. Respondent's value was incorrectly
21 determined but close to actual solution of 6990 ft-lbs by sheer accident. However, since the
22 stress and deflection check on the existing rafters was shown to be within allowable limits under
23 the higher load, the conclusions that the existing joists could safely support the building loads did
24 not materially change. Nevertheless, this is a fundamental error and not usually one made by a
25 structural engineer. The above-described conduct by respondent constitutes incompetence.

26 E. (From page 12 [in sequence] of Calculations) -- Under "Footing,"
27 respondent failed to design the footing for the main transverse frames with the added vertical
28 loads resulting from overturning forces applied to the frames. The "Garage R.F. Clg Bm, E-W"

1 is part of the transverse moment frames. In addition, the loads on the footings are eccentric and
2 respondent failed to check the bending moment, beam shear and punching shear in the design of
3 the footing resulting from this eccentricity. Finally, respondent failed to check the soil bearing
4 pressure due to the eccentric load combined with the self weight of the footing. The soil bearing
5 pressure at the eccentric side or column side of the footing is greater than 3000 psf or more than
6 twice the design allowable value of 1330 psf (including 1.33 overload factor is permitted for
7 forces due to wind or earthquake). Calculation for the spread footing is for a frame located at
8 Grid line 2.9 found on foundation plan Sheet S-3. Although the drawings indicate that 4
9 different types of frames are needed, calculations for the remaining three frames shown on the
10 project drawings were completely omitted by respondent. The above-described conduct by
11 respondent constitutes negligence and incompetence.

12 F. (From page 13 [in sequence] of Calculations) -- SFBC 1605.4 allows the
13 use of a reduced C_e value of 0.4 for designing for wind loads on wood buildings that are less
14 than 4 stories high. Respondent either was not aware of or failed to take advantage of this code
15 provision to reduce the total lateral design load for the moment frames that were ultimately
16 designed. Respondent determined that the lateral load was 762.5 plf on the ground floor
17 diaphragm. Had he used the lower limit provided by the code, the design load would have been
18 254 plf or less than $\frac{1}{2}$ of the original value. Consequently, the frames were over designed by
19 respondent. The above-described conduct by respondent constitutes negligence.

20 G. (From page 14 [in sequence] of Calculations) -- In determining the seismic
21 loads to the building in both principle directions of the building, respondent failed to use the
22 provisions of Title 24, part 2, California Code of Regulations, California Building Code (CBC)
23 section 1630.5 to determine the distribution of lateral loads to the building at each respective
24 floor. In addition, respondent failed to follow CBC section 1633.2.9 to properly determine
25 diaphragm shears in the building. The above-described conduct by respondent constitutes
26 negligence and incompetence.

27 H. (From page 15 [in sequence] of Calculations) -- In the design of the rigid
28 frame, the statement that the horizontal reactions $V_1=V_2=7430\#$ is incorrect and does not

1 include the influence of the horizontal forces at the support due to the vertical load P. V1 and V2
2 are under designed by nearly 5000#. Respondent uses the assumption that the point of inflection
3 in the column is at 2/3 the height of the column which is incorrect. For the problem statement
4 given, there is no point of inflection in the column and the maximum moment occurs at the beam
5 column joint. Based on the erroneous assumption for the point of inflection, respondent
6 calculated the moment at the beam column joint and added the maximum moment generated
7 from the beam to the joint. This method is not correct and yields a moment at the joint of
8 144,455 ft #. The correctly calculated moment for DL+LL+W load is 100,000ft # at the critical
9 point. Respondent neglected to design the critical connection detail of the beam column joint
10 and the column base detail. The above-described conduct by respondent constitutes negligence
11 and incompetence.

12 10. In preparing plans for the above-mentioned Clay Street property, respondent
13 committed certain acts or omissions in his calculations, which are hereafter set forth.

14 Drawings: (Comments based on most recent drawings by respondent)

15 A. Sheet S-1: There are inconsistencies with the vertical loads and lateral
16 loads listed on Sheet S-1 with values used in the body of calculations. For example, under the
17 heading Vertical Loads 1.a., the roof dead load is listed at 19 psf which is inconsistent with the
18 value of 24 psf used in the calculations. Under Lateral Loads 2.a., $N_a=1.2$ and $C_a=0.53$ versus
19 $N_a=1.0$ and $C_a=.44$ in the calculations. The seismic design criteria called out in the drawings is
20 based on lateral forces from CBC 1630.2.3.2, but does not correspond to the methodology of
21 CBC 1630.2.1 used in the actual design of the seismic strengthening work as presented on page 1
22 of the calculations. Additionally, N_a need not exceed 1.0 per SFBC 1605.4.3. The above-
23 described conduct by respondent constitutes negligence.

24 B. Sheet S-1: The section on special inspection failed to specify inspection of
25 full penetration welding needed at the steel beam to column connections for each of the moment
26 frames as required by CBC 1705.1.5. The above-described conduct by respondent constitutes
27 negligence.

28 C. Sheet S-3: There are neither calculations nor a design provided for type C

1 footings located along grid line 7 which support the new exterior decks. In addition, respondent
2 failed to provide engineering design and calculations for design of the footings located at the
3 moment frames at grid lines 1.8, 4.2, and 4.9, whereas the standard of practice is to provide
4 design information for each specific condition unless it can be shown that one design governs
5 other cases. The above-described conduct by respondent constitutes negligence.

6 D. Sheet S-4: There is a note that states "(N) 1/2" Plywood on (E) ceiling
7 throughout" on the first floor framing plan. Respondent did not provide any calculations to
8 determine first floor diaphragm shears to justify the necessity of strengthening the floor for
9 lateral loads. Respondent failed to follow the standard of practice by failing to determine the
10 lateral load carrying capacity of the existing floor diaphragm using the provisions of SFBC
11 1605.4.4 which references Uniform Code of Building Conservations Table 16C-D listing an
12 allowable value of 600 plf allowable diaphragm shear strength. The diaphragm shear is less than
13 the 600 plf threshold. Consequently, the addition of the plywood sheathing was unjustified based
14 on minimum code provisions. The above-described conduct by respondent constitutes
15 negligence.

16 E. Sheet S-12: Elevation of the building depicts knee braces added in both
17 the longitudinal and transverse directions of the building at each exterior deck of each floor. The
18 knee braces are an acceptable design option to provide lateral stability for the exterior deck and
19 well within the standard of practice. However, respondent failed to provide any calculations for
20 the design of these knee braces. The above-described conduct by respondent constitutes
21 negligence.

22 F. Sheet S-13: In detail 9, the cross section of the grade beam calls out for
23 #4@12 o.c. each way. The standard of practice is to utilize the transverse reinforcement mainly
24 as a shear reinforcement and, consequently, it should be oriented vertically and not horizontally,
25 and usually consists of enclosed ties or stirrups to provide confinement for the longitudinal
26 reinforcing. The above-described conduct by respondent constitutes negligence.

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1 reference as though fully set forth.

2 PRAYER

3 WHEREFORE, Complainant requests that a hearing be held on the matters herein
4 alleged, and that following the hearing, the Board for Professional Engineers and Land Surveyors
5 issue a decision:

6 1. Revoking or suspending Civil Engineer License Number C17985, issued
7 to Darrel Wayne Harris.

8 2. Revoking or suspending Structural Engineer License Number S 2433,
9 issued to Darrel Wayne Harris

10 3. Ordering Darrel Wayne Harris to pay the Board for Professional Engineers
11 and Land Surveyors the reasonable costs of the investigation and enforcement of this case,
12 pursuant to Business and Professions Code section 125.3;

13 4. Taking such other and further action as deemed necessary and proper.

14
15 DATED: 1/5/09 _____

16 Original Signed
17 CINDI CHRISTENSON, P.E.
18 Executive Officer
19 Board for Professional Engineers and Land Surveyors
20 Department of Consumer Affairs
21 State of California

22 Complainant

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